
# Appeal Brief

**for the invention "Computer Mouse"**

The idea of our invention is very simple: A computer mouse moved on a table contains a rubber ball in a case. As the case is moved on a surface, the ball will rotate and it will rotate inside of the ball two wheels which will give two signals to the computer, and those will move the pointer on the monitor screen in two directions X and Y. Those two wheels are called X and Y coordinate shafts. They are perpendicular each other and their plane is parallel with the table surface, on which the mouse is moved. Because two contacts (X and Y coordinate shafts) do not keep the ball in place ( the ball will touch the case), is necessary a third contact ( H in fig 1 in our specification), which is a wheel placed in the opposite position of the X and Y coordinate shafts. This wheel is pressed with a spring against the ball, in the case of a mouse having a case touching the table. The spring has to create a proper pressure of the ball against the X and Y coordinate shafts. Usually the third wheel is placet in the X and Y coordinate shafts plane, and this is above the middle plane of the ball. The middle plane is that which contains the center of the ball. If the mouse case does not touch the table, like in the **Toyoda**'s Pen mouse, the third wheel does not require a spring because the pressure the pen is pressed on the table will create the desire pressure on the X and Y coordinate shafts. The **Toyoda**'s Pen mouse contain a magnet inside of the pen to crate a upward force against the ball to keep it in place if the pen is lift from the table. A part of **Toyoda**'s clam says that the magnet 49 in fig 3 will press the ball against the X and Y coordinate shafts. This is similar with our clam, but their clam contains the third contact which is the wheel 52 in fig 3. The **Toyoda**'s Pen mouse has three contacts (X and Y coordinate shafts and wheel 52). All these three contacts are placed in a plane above the middle plane, otherwise the ball will pass through, as it is pressed against the table. These contacts and their position will create higher friction for the ball. See the **"Detailed Disagreement with your final decision opposing the patent No: 5,371,516 (Toyoda) to our computer mouse".** for higher friction position.(1-6-98)

Our magnet replaces their 52 wheel, so the contacts of the ball are only two. (the magnet M in our fig 2 does not touch the ball). Our invention eliminate this third contact and the pressure of the ball against the X and Y coordinate shafts is created with a permanent magne, placed in a proper position (fig 2 in our specifications). **The X and Y coordinate shafts plane can be the middle plane** and the magnet is placed in the middle plane or bellow, to create enough pressure against the X and Y coordinate shafts and against the table. If the force F, created by the magnet M in our fig 2, is in the middle plane, then the force exercised against the table is only the ball weight. If this is not enough, to avoid the ball to slide on the table, the magnet can be placed below the X and Y coordinate shafts plane, so the force F will have two components, one in the X and Y coordinate shafts plane, pressing the ball against X and Y coordinate shafts,

and one vertical, pressing the ball against the table. All these details are "know how".
I mention that the mouse case in our invention touches the table and it is moved on the table in order to get the ball smooth rotation. The two inventions opposed to our invention, having three contacts placed in a plane above the middle plane, having higher friction, does not have the ball rotation as smooth as ours.

**The clams explanation:**

The clam in our initial specification (1-28-96) is :

[CLAIM

This Computer Mouse is characterized by using a magnet, to press the rubber magnetic core ball against the coordinates X and Y shafts. ]

The clam in our "new substitute specification (1-06-98)" is :

**We claim:**

A computer mouse with two contacts inside of it, comprising:

a magnet which attracts the mouse magnetic core ball and rubber outer layer, without touching the ball, against the coordinates x and y shafts, in a plane parallel with the shafts x and y plane.

All the matter in the "new substitute specification(1-06-98)" are presented in the materials I sent before the final rejection.

A computer mouse with two contacts inside of it is presented:

1. In the initial specification (1-28-96) in the lines 9 and 10 as:

**"This invention eliminates the above disadvantages, because it will eliminate the wheel H"** and in lines 16 and 17 as :

**"Between the magnet and the ball will exist air and the ball has magnetic core"**

2. In **The discussions of the references applied against our claim in the invention "Computer Mouse"**, sent 5-25-97. (before the final rejection).

in the lines 7, 8 and 9 as:

"This total force will press the ball against its three contacts. This is different than ours, **which has just two contacts as it is seen in fig 2"**

in the lines 14 and 15 as:

"This is different than ours, **which has just two contacts and a magnet not electromagnets."**

against the coordinates x and y shafts, in a plane parallel with the shafts x and y plane.

The direction of the force created by the magnet is parallel with the shafts x and y plane. as it is visible in fig 2.

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